



| MODEL           | rpm / Hz         | VOLTAGE          | PRIME <sup>(1)</sup>      | STANDBY <sup>(2)</sup>    |
|-----------------|------------------|------------------|---------------------------|---------------------------|
| <b>PI 1656P</b> | <b>1500 / 50</b> | <b>400 / 230</b> | <b>1500 kVA / 1200kWe</b> | <b>1650 kVA / 1320kWe</b> |

Full rated power available upto 100 meter elevation at ambient of 27degC, for other temperature and altitude limits please consult application team.

### ENGINE SPECIFICATIONS

|                                   |                                |
|-----------------------------------|--------------------------------|
| Rated Output (PRP) <sup>(1)</sup> | 1331 kW <sub>m</sub>           |
| Rated Output (ESP) <sup>(2)</sup> | 1459 kW <sub>m</sub>           |
| Engine Make & Model               | Perkins<br>4012-46T AG2A       |
| No. of Cylinders                  | 12, V Type                     |
| Cycle                             | 4 Strokes                      |
| Aspiration                        | Turbocharged                   |
| Cooling Method                    | Water                          |
| Governing Type                    | Electronic                     |
| Governing Class                   | G2 - ISO 8528 Part 1           |
| Compression Ratio                 | 13.6:1                         |
| Displacement                      | 45.8 L (2794.in <sup>3</sup> ) |
| Bore x Stroke (mm / in)           | 160x190 / 6.3x7.5              |
| Battery and Charger Alternator    | 24 VDC , 40 Amp                |

### AIR SYSTEM

|                           |                          |
|---------------------------|--------------------------|
| Air Filter Type           | Dry Element              |
| Combustion Air Flow (PRP) | 120 m <sup>3</sup> /min  |
| Combustion Air Flow (ESP) | 128 m <sup>3</sup> /min  |
| Radiator Air Flow         | 1944 m <sup>3</sup> /min |

### COOLING SYSTEM

|                              |                        |
|------------------------------|------------------------|
| Total Coolant Capacity (L)   | 210 L (55.5 US gal)    |
| Water Pump Type              | Centrifugal Eng-Driven |
| Radiator Fan Load            | 64 kW                  |
| Heat Radiation to Room (PRP) | 96 kW                  |
| Heat Radiation to Room (ESP) | 107 kW                 |

### LUBRICATION SYSTEM

|                    |                               |
|--------------------|-------------------------------|
| Oil Filter Type    | Full-flow spin-on oil filters |
| Total Oil Capacity | 177 L (46.75 US gal)          |
| Oil Pan            | 159 L (42 US gal)             |
| Oil Type           | API CH4/CI4; SAE 15W-40       |

### FUEL SYSTEM

|   |                           |
|---|---------------------------|
| Fuel Filter: Full-flow spin-on fuel oil filters |                           |
| Recommended Fuel                                | Class A2 Diesel           |
| Fuel Consumption Standby                        | 345 L/hr (91.1 US gal/hr) |
| Fuel Consumption 100% PRP                       | 306 L/hr (80.8 US gal/hr) |
| Fuel Consumption 75% PRP                        | 225 L/hr (59.4 US gal/hr) |
| Fuel Consumption 50% PRP                        | 149 L/hr (39.3 US gal/hr) |

### EXHAUST SYSTEM

|                         |                                 |
|-------------------------|---------------------------------|
| Muffler Type            | Residential Grade               |
| Max. Back Pressure      | 3 kPa                           |
| Exhaust Gas Flow        | 264.2/288.1 m <sup>3</sup> /min |
| Exhaust Gas Temperature | 401 / 416 °C                    |

### ALTERNATOR SPECIFICATIONS

|                                       |                            |
|---------------------------------------|----------------------------|
| Rated Output (Prime) <sup>(1)</sup>   | 1500 kVA                   |
| Rated Output (Standby) <sup>(2)</sup> | 1650 kVA                   |
| Alternator Make & Model               | Leroy somer<br>LSA 50.2 L8 |
| Number of Poles                       | 4                          |
| Number of Winding Leads               | 6 / 12                     |
| Type of Bearing                       | Single                     |
| Insulation Class / Temp Rise          | H/H                        |
| Efficiency @ Rated Voltage            | 95.0%                      |
| Ingress Protection Rating             | IP 23                      |
| Excitation System                     | AREP / PMG                 |
| AVR Model                             | D350                       |

### ALTERNATOR OPERATING DATA

|                     |   |
|---------------------|---|
| Overspeed           | 2250 r.p.m                              |
| Voltage Regulation  | ± 0.25 %                                |
| Waveform distortion | No-load < 3.5 %,<br>Linear load < 3.5 % |
| Radio Interface     | EN 61000-6-2 & EN 61000-6-4             |
| Cooling Air Flow    | 1.8 m <sup>3</sup> /sec                 |

<sup>(1)</sup> **PRIME POWER RATING (PRP):** PRP is defined as the maximum power which a Generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year. The permissible average power output over 24 hours shall not exceed 70% of PRP unless otherwise agreed by RIC engine manufacturer. An overload capability of 10% of 100% of the prime rated electrical power is permitted for emergency use for a period of 1 hour within 12 hours of operation

<sup>(2)</sup> **EMERGENCY STANDBY POWER RATING (ESP):** ESP is defined as the maximum power available during a variable electrical power sequence, under the stated operation condition, for which a generating set is capable of delivering power in the event of a utility power outage or under test condition for up to 200 Hours of operation per year. The permissible average output over 24 hour of operation shall not exceed 70 % of the ESP power rating noting that no over load is permitted.

### CONTROLLER SPECIFICATIONS

|                           |                                      |
|---------------------------|--------------------------------------|
| Controller Make & Model   | DeepSea 6120                         |
| Operation Mode            | MRS / AMF (optional)                 |
| Display                   | Graphic Back-lit LCD (128x64) pixels |
| Ingress Protection Rating | IP65                                 |
| Binary Inputs/Outputs     | 8 / 6                                |
| Analog Inputs             | 4                                    |
| Measurement               | Vac, A, Hz, kVA, kW, Vdc             |
| Event Log                 | Alarms log, Hrs log                  |
| Communication             | USB                                  |

### ENCLOSURE SPECIFICATIONS

|                           |   |
|---------------------------|---|
| Enclosure Type            | Acoustic & Weather Proof                          |
| Anticorrosive Protection  | Polyurethane paint with anti corrosive base coat. |
| Ingress Protection Rating | IP23  |
| Lifting                   | ISO Standard Lifting                              |
| Emergency                 | External Emergency Push Button                    |
| Canopy RAL Color          | RAL 2000  |
| Baseframe RAL Color       | RAL 9011  |
| Noise Pressure level @ 7m | 85 dB(A)  |

### GENSET DIMENSIONS & WEIGHT

| GENSET TYPE | Length (mm)              | Width (mm) | Height (mm) | Fuel Tank Capacity (L) | Dry Weight (kg) | Wet Weight (kg) |
|-------------|--------------------------|------------|-------------|------------------------|-----------------|-----------------|
| OPEN        | 6219                     | 2005       | 2751        | NA                     | 10777           | NA              |
| CLOSE       | 30 Feet ISO HQ Container |            |             | NA                     | 15400           | 15500           |

Note: The following dimensions are for preliminary guidance. For more detailed and accurate dimensions, please refer to the General Arrangement Drawing (GAD).

### STANDARD MECHANICAL FEATURES

Genset design provides a low noise level with an optimized performance of the ventilation and exhaust systems at 50 °C ambient temperature.

Robust structure design of Enclosure and Baseframe.

Heavy duty lifting lugs.

Multi doors for easy access & maintenance.

Ingress Protection Rating according to BS EN 60529.

Heavy Duty Baseframe with built-in tank & forklift pockets.

Residential Grade Muffler with rain cap.

### STANDARD ELECTRICAL FEATURES

An advance Control system is designed to provide a comprehensive protection and to monitor the parameters of generating set.

MCCB power circuit breaker.

Battery with charging alternator, cables, and tray.

Sealed harness & high resistant electrical connections.

Fast and accurate protection response.

Generating Set remote start function.

Numeric display with LED. Various languages capable.

### OPTIONAL FEATURES

Advanced Controllers are available on request.

4 poles manual / Motorized Circuit breaker

Jacket water pre-heater

Static Battery Charger

Critical grade muffler

Fuel Filter / Water separator Fuel Filter

Remote Annunciator

### Application

Infrastructure, Industrial, Residential, Telecom, Defense, Mining, Agriculture

